THE PANAMA DISEASE.—PRELIMINARY NOTICE.—This fungoid disease on the *Musa sapientum* var. *Gros Michel* was, it seems, first detected in Central America, practically destroying the crops in Costa Rica and seriously threatening to dry up a new source of revenue to Dutch Guiana, where this plant, the banana, was recently introduced. Experts here and in the U.S.A. had not yet succeeded in finding the cause of the disease. I did not hesitate, however, to undertake the research, the result being that I succeeded, after three weeks' assiduous working, in finding a fungus in such a connexion with the diseased tissues as to convince me of its being the cause of the disease.

The general microscopical aspect of these tissues, the ramification of the mycelium, the formation of the spores—chlamydospores and conidia,—the grouping of the spores into clusters, the mode of germination, &c., are all undoubtedly in favour of the conclusion that the *Panama disease* is caused by one of the Ustilagineae, probably in company with a member of the Chytridious order.

I hope to publish the final results of my research at the earliest possible date.

The accompanying figures, drawn from my preparations, will help to corroborate my preliminary conclusions.

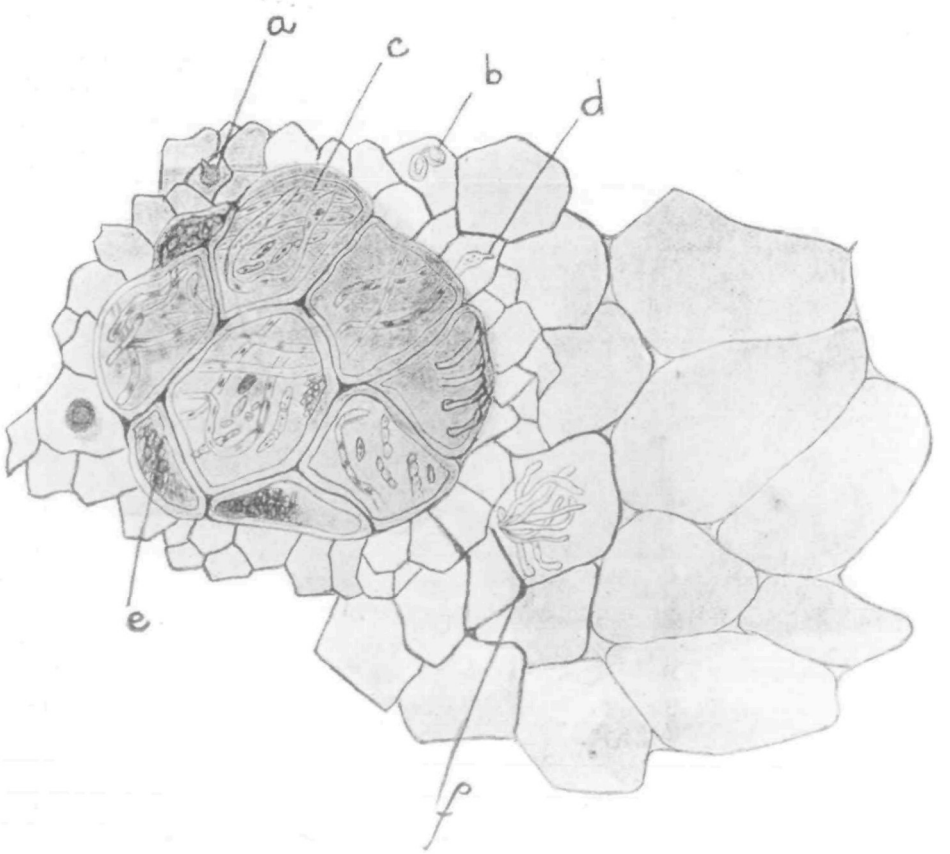

FIG. 1. Transverse section through rhizome. × 255. *a*, germinating chlamydospore; *b*, two chlamydospores joined together; *c*, mycelium in wood vessels; *d*, conidium formation; *e*, breaking up of the mycelium into chlamydospores; *f*, haustorial hyphae.

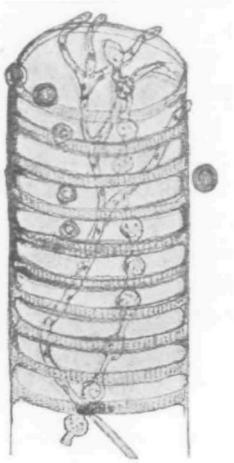

FIG. 2. *A spiral vessel* through which run mycelial threads breaking up into chlamydospores. × 255.

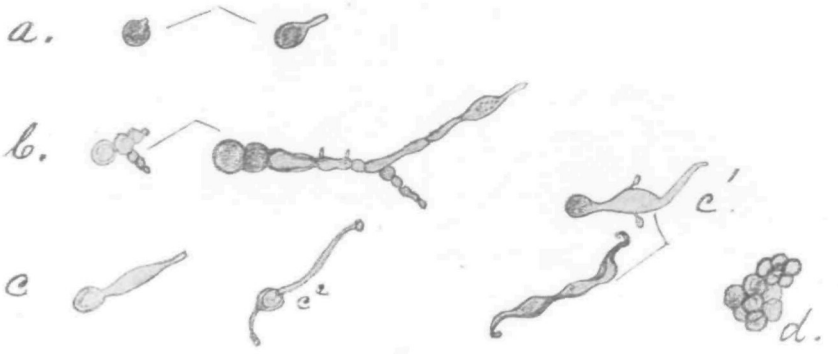

FIG. 3. Germination of spores—different modes. × 255.

E. ESSED.

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March 4, 1910.